WHAT IS CLAIMED IS:

1. A method for controlling a transmission control protocol window size in an asynchronous transfer mode network, wherein a window size is computed by using congestion information of a network during data transmission from a transmitting side ATM terminal to a receiving side ATM terminal, an explicit rate value in a resource management cell of an ATM level being used as the congestion information.

2. The method according to claim 1, wherein the explicit rate value stores a minimum value of throughputs, which each node of the network can receive, in the network resource management cell.

3. The method according to claim 1, wherein the window size is computed by the Expression wherein,

window size = MIN [credit, cwnd],

('credit' is an amount of data which the transmission control protocol receiving side can receive, 'cwnd' is a congestion window, cwnd = transmission control protocol throughput * estimated_RTT * safety_factor),

'estimated_RTT' is an estimated round trip time of the packet,

'safety_factor(s)' is a numerical value compensating for variations in network states and RTT,

$$\text{TCP throughput} = \text{last\_ER} * \frac{48}{53} * \frac{31}{32} * \frac{TCP\_MSS}{TCP\_MSS + 56bytes}$$

'last_ER' is an ER value in the currently-received RM cell, and

'TCP_MSS' is a maximum segment size of the transmission control protocol level.

4. A method for controlling a transmission control protocol

window size in an asynchronous transfer mode network, comprising:

a step for an ATM transmitting terminal to receive a resource management cell;

a step for transmitting an explicit rate value in the received resource management cell to a transmission control protocol level in the ATM transmitting terminal;

a step for setting a congestion window to be '1', when the explicit rate value is received;

a step for computing the congestion window, when an acknowledgment signal is received from an ATM receiving terminal; and

a step for computing a window size, when the congestion window value is computed, and for transmitting a data to the ATM receiving terminal according to the computed size.

5. The method according to claim 4, wherein the congestion window is computed by the Expression wherein,

congestion window = transmission control protocol throughput * estimated_RTT * safety_factor

('estimated_RTT' is an estimated round trip time of the packet, and 'safety_factor(s)' is a numerical value compensating for variations in network states and RTT).

6. The method according to claim 5, wherein the transmission control protocol throughput is computed by the Expression wherein,

$$\text{TCP throughput} = \text{last\_ER} * \frac{48}{53} * \frac{31}{32} * \frac{TCP\_MSS}{TCP\_MSS + 56bytes}$$

('last_ER' is an ER value in the currently-received RM cell, and

'TCP_MSS' is a maximum segment size of the transmission control protocol level).

7. The method according to claim 4, wherein the window size is computed by the Expression wherein,

window size = MIN [credit, cwnd],

('credit' is an amount of data which the transmission control protocol receiving side can receive, and 'cwnd' is a congestion window).